

*Preliminary Amendment*  
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*Attorney Docket No. MXI-166*  
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**Amendments to the Claims**

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Please cancel claims 1-55, without prejudice or disclaimer. Please add new claims 56-79 as follows:

1-55. (Canceled)

56. (New) An isolated human monoclonal antibody, or an antigen-binding portion thereof, that has the following properties:

- (a) the antibody binds to human dendritic cells;
- (b) the antibody binds to human macrophages but to a lesser extent than the binding to human dendritic cells;
- (c) the antibody inhibits dextran uptake by human dendritic cells;
- (d) the antibody is internalized following binding to human dendritic cells; and
- (e) the antibody, when conjugated to an antigen, enhances presentation of the antigen by human dendritic cells.

57. (New) The human antibody of claim 56, which does not bind to non-dendritic cells from human tissues selected from the group consisting of skin, tonsil, liver, breast, spleen, kidney, lymph node, brain, testis, pancreas, heart, small intestine, bone marrow and lung.

58. (New) The human antibody of claim 56, which binds to human macrophage B11 antigen having an approximate molecular weight of 180 kD as measured by SDS-PAGE and comprising the amino acid sequence shown in SEQ ID NO:7.

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59. (New) The human antibody of claim 56, which binds to the human macrophage mannose receptor.

60. (New) The human antibody of claim 56, wherein the antibody binds to human dendritic cells with a binding affinity of at least about  $10^7 M^{-1}$ .

61. (New) The human antibody of claim 56, wherein the antibody binds to human dendritic cells with a binding affinity of at least about  $10^8 M^{-1}$ .

62. (New) The human antibody of claim 56, wherein the antibody heavy chain is an IgG1 heavy chain.

63. (New) The human antibody of claim 56, which is an antibody fragment or a single chain antibody.

64. (New) An isolated human monoclonal antibody, or antigen binding portion thereof, comprising a human heavy chain variable region comprising CDR1, CDR2, and CDR3 sequences and a human light chain variable region comprising CDR1, CDR2, and CDR3 sequences, wherein:

- (a) the human heavy chain variable region CDR3 sequence comprises amino acid residues 99-105 of SEQ ID NO: 4, and conservative modifications thereof;
- (b) the human light chain variable region CDR3 sequence comprises amino acid residues 89-97 of SEQ ID NO: 2, and conservative modifications thereof;
- (c) the antibody binds to the human macrophage mannose receptor on human dendritic cells;
- (d) the antibody inhibits dextran uptake by human dendritic cells;
- (e) the antibody is internalized following binding to human dendritic cells; and

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(f) the antibody, when conjugated to an antigen, enhances presentation of the antigen by human dendritic cells.

65. (New) The human antibody of claim 64, wherein the human heavy chain variable region CDR2 sequence comprises amino acid residues 50-66 of SEQ ID NO: 4, and conservative modifications thereof; and the human light chain variable region CDR2 sequence comprises amino acid residues 50-56 of SEQ ID NO: 2, and conservative modifications thereof.

66. (New) The human antibody of claim 64, wherein the human heavy chain variable region CDR1 sequence comprises amino acid residues 31-35 of SEQ ID NO: 4, and conservative modifications thereof; and the human light chain variable region CDR1 sequence comprises amino acid residues 24-34 of SEQ ID NO: 2, and conservative modifications thereof.

67. (New) An isolated human monoclonal antibody, or antigen binding portion thereof, comprising a human heavy chain variable region and a human light chain variable region, wherein:

(a) the human heavy chain variable region comprises a sequence that is at least 80% homologous to SEQ ID NO: 4;

(b) the human light chain variable region comprises a sequence that is at least 80% homologous to SEQ ID NO: 2

(c) the antibody binds to the human macrophage mannose receptor on human dendritic cells;

(d) the antibody inhibits dextran uptake by human dendritic cells;

(e) the antibody is internalized following binding to human dendritic cells; and

(f) the antibody, when conjugated to an antigen, enhances presentation of the antigen by human dendritic cells.

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68. (New) An isolated human monoclonal antibody, or antigen binding portion thereof, comprising human heavy chain and human light chain variable regions comprising the amino acid sequences shown in SEQ ID NO:4 and SEQ ID NO:2, respectively.

69. (New) An isolated human monoclonal antibody comprising:

- (a) a heavy chain variable region having CDR1, CDR2 and CDR3 sequences set forth as amino acids 31-35, amino acids 50-66 and amino acids 99-105 of SEQ ID NO: 4, respectively; and
- (b) a light chain variable region having CDR1, CDR2 and CDR3 sequences set forth as amino acids 24-34, amino acids 50-56 and 89-97 of SEQ ID NO: 2, respectively;

wherein the antibody binds the human macrophage mannose receptor on human dendritic cells.

70. (New) An isolated human monoclonal antibody comprising:

- (a) a heavy chain variable region of a human  $V_H$  5-51 gene; and
- (b) a light chain variable region of a human  $V_K$  L15 gene;

wherein the antibody binds the human macrophage mannose receptor on human dendritic cells.

71. (New) A composition comprising the human antibody, or antigen binding portion thereof, of claim 56 and a pharmaceutically acceptable carrier.

72. (New) A molecular complex comprising the human antibody, or antigen binding portion thereof, of claim 56 linked to an antigen.

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73. (New) The molecular complex of claim 72, wherein the antigen comprises a component of a pathogen.

74. (New) The molecular complex of claim 72, wherein the antigen comprises a tumor antigen.

75. (New) The molecular complex of claim 72, wherein the antibody portion of the complex comprises an antibody fragment or a single chain antibody.

76. (New) A composition comprising the molecular complex of claim 72 and a pharmaceutically acceptable carrier.

77. (New) A method for targeting an antigen to a human dendritic cell comprising contacting the human dendritic cell with the molecular complex of claim 74.

78. (New) A method of inducing or enhancing an immune response against an antigen in a subject comprising administering to the subject the molecular complex of claim 74.

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